

REMARKS

Claims 1-3 and 6 have been rejected under 35 U.S.C. Section 103(a) as being unpatentable over LeJeune in view of Presswalla and further in view of Valverde. This ground of rejection is respectfully traversed. Applicant reasserts the arguments made in the last Amendment as it is respectfully believed that the Examiner has failed to give appropriate credence and weight to those remarks. Additionally, in the LeJeune reference, the plurality of connectors is used to hold the insulation layers together, while in the present invention, the plurality of connectors are connecting the two layers of concrete through insulation and transfer structural forces between the two layers, which is substantially different from the LeJeune patent. In addition, the Examiner describes the plurality of connectors as portions of concrete extending between the first layer and the second layer, which is a misinterpretation of the LeJeune patent. Since LeJeune patent is for “Producing Unique Hollow Core Concrete Panels”, it is obvious to one having ordinary skill and knowledge of hollow core panels that the tendons are pre-tensioned as no post-tensioned assemblies are used in hollow core concrete panel manufactured as described in the patents referenced in the LeJeune patent. As explained in the present specification, page 2, lines 11-12, for pre-tensioned panels, one has to have a relatively stiff form or bed. In addition, the stresses developed in two methods are different and hence post-tensioned and pre-tensioned tendons cannot be used interchangeably. Valverde teaches that the roof structural systems can be post-tensioned or pre-stressed (please note that Valverde uses the term “pre-stressed” for pre-tensioned system) and describes completely different methods of construction for each. While the Examiner is correct that Valverde teaches that either post-tensioned structural systems (i.e., completed roof panels) or pre-tensioned structural systems (again, completed roof panels) can be used for the same purposes, Valverde never teaches that post-tensioned tendons and pre-tensioned tendons can be used interchangeably. It is respectfully requested that the 103(a) rejection be reconsidered and withdrawn in view of the arguments made above.

In addition, claim 1 has been amended to recite that the connectors interconnecting the two concrete panels transmit structural forces between the two panels to provide composite character to the wall panel. Those skilled in the art recognize that the portions of concrete extending between the two layers 80 and 82 of LeJeune do not transfer forces between the two layers and are cast simultaneously with the top layer. However, those skilled in the art also

recognize that the portions of concrete identified by the Examiner in the Office Action as “connectors” are referred to in the trade as “solid sections” and are thermally inefficient. The plurality of connectors 22 used in the present invention provide low thermal conductivity while transmitting structural forces between the two layers. Reconsideration and withdrawal of the 103(a) rejection in light of the foregoing amendment and these remarks is respectfully requested.

In regard to the rejection of claims 3, 4 and 6, those skilled in the art of hollow core panels, the subject matter of the LeJeune reference, know that the pre-stressing force in the cables or tendons used in hollow core panel construction is transmitted to the concrete by the bond strength of the concrete along the full length of the cable embedded in the concrete and no end anchorages are required. LeJeune cannot be applied against claims 3, 4 and 6 because it teaches absolutely nothing with respect to the end anchorages recited in claim 2, from which claims 3, 4 and 6 depend. Reconsideration and withdrawal of the rejection of claims 3, 4 and 6 is respectfully requested.

In regard to the rejection of claims 7 – 10 (claim 11 having been canceled), it is evident in the LeJeune reference (see, for example, claim 5) that the prestressing cables are placed first, then first layer of concrete is placed on the bed and then billets are placed between the prestressing cables. With the current invention, and as recited in the method claim 7, the post-tensioning cables are placed in the insulation after the first layer of concrete is placed. The sequence recited in claims 7 – 10, accordingly, is distinct from the sequence taught in LeJeune. Again, this is reflective of the very substantial differences between the pre-stressed system of LeJeune and the post-tensioned system of the present invention. In addition, the last sentence of paragraph 0022 of LeJeune specifies that the billets should avoid the pre-stressed cables while with the current invention the tendons can be touching the insulation when placed in the regularly spaced grooves in the insulation since there is sheathing which covers the tendons. Further, as recited in claim element 7(h), the longitudinal element or tendon is adjusted to produce tension only after the concrete layers have cured, whereas the longitudinal element or cable of LeJeune stressed prior to curing of the concrete. Reconsideration and withdrawal of the rejection of claims 7 - 10 based on LeJeune patent in view of Presswalla and Valverde is respectfully requested.

The application has been amended to correct minor informalities, to further distinguish the application over the prior art, and to more particularly point out and distinctly claim the

subject matter which Applicant regards as the invention so as to place the application, as a whole, into a prima facie condition for allowance. Great care has been taken to avoid the introduction of new subject matter into the application as a result of the foregoing modifications.

Accordingly, the purpose of the claimed invention is not taught nor suggested by the cited references, nor is there any suggestion or teaching which would lead one skilled in the relevant art to combine the references in a manner which would meet the purpose of the claimed invention. Because the cited references, whether considered alone, or in combination with one another, do not teach nor suggest the purpose of the claimed invention, Applicant respectfully submits that the claimed invention, as amended, patentably distinguishes over the prior art, including the art cited merely of record.

Based on the foregoing, Applicant respectfully submits that its claims 1-4 and 6-10, as amended, are in condition for allowance at this time, patentably distinguishing over the cited prior art. Accordingly, reconsideration of the application and passage to allowance are respectfully solicited.

The Examiner is respectfully urged to call the undersigned attorney at (515) 288-2500 to discuss the claims in an effort to reach a mutual agreement with respect to claim limitations in the present application which will be effective to define the patentable subject matter if the present claims are not deemed to be adequate for this purpose.

Respectfully submitted,

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